Elevation correction with GDAS data ...

jonc 33 posts since

Sep 20, 2007 Dear LIS group,

I thought I had everything set up correctly for using GDAS elevation correction, but apparently not.

I ran the data_proc program to create the 3 different GDAS terrain files at my 4-km resolution. I did the same for the LIS elev dataset.

Next, I set up the lis.config file as follows:

Elevation data source: 1 # 1-GTOPO30 elevation

Use elevation correction: 1 #0- do not use, 1-use lapse rate

#Topography maps

elevation map: ./LISDATA/lis_elev_4KM.1gd4r

slope map:

aspect map:

curvature map:

topography lower left lat: -59.98

topography lower left lon: -179.98

topography upper right lat: 89.98

topography upper right lon: 179.98

topography resolution (dx): 0.04

topography resolution (dy): 0.04

#---------------------------------FORCINGS----------------------------------

#GDAS (forcing option =1)

GDAS forcing directory: ./FORCING/GDAS

GDAS T126 elevation map:

GDAS T170 elevation map: ./LISDATA/gdas_T170_elev_4KM.1gd4r

GDAS T254 elevation map: ./LISDATA/gdas_T254_elev_4KM.1gd4r

GDAS T382 elevation map: ./LISDATA/gdas_T382_elev_4KM.1gd4r

GDAS domain x-dimension size: 512

GDAS domain y-dimension size: 256

GDAS number of forcing variables: 10

So, here are the errors I am receiving in the batch output:

**********Error**********

elevation reading routine for domain 1 and forcing 4 is not defined

program will segfault.....

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**********Error**********

forrtl: severe (174): SIGSEGV, segmentation fault occurred

forrtl: severe (174): SIGSEGV, segmentation fault occurred

Any suggestions?

Jon Case Tags: lis

sujay *118 posts since*
Sep 20, 2007 1. **Re: Elevation correction with GDAS data** Apr 25, 2008 4:50 PM

Jon,

We will need to implement elevation reading routines for gdas for the lambert projection. Currently only lat/lon and gaussian domains are implemented. (Please see under src/baseforcing/gdas). You will need to add a reading routine for lambert projection and then register it in src/plugins/baseforcing_pluginMod.F90

-S

cbblanke *38 posts since*
Apr 18, 2008 2. **Re: Elevation correction with GDAS data** May 9, 2008 11:13 AM

in response to: sujay

I am trying to understand why these domain-specific read routines are needed. Say I want to use the GDAS forcing. My model domain is defined (lambert conformal), and LIS has read in the elevation (in the parameter domain) and interpolated it to my model domain. The base forcing domain is defined and has its own elevation map. Isn't that enough to correct the base forcing data to the model (run) domain elevations (interpolate the base forcing elevations to the model domain grid points and compare to the model elevations)? Why do you need to read the GDAS elevations in the lambert projection?

Clay

sujay *118 posts since*
Sep 20, 2007 3. **Re: Elevation correction with GDAS data** May 9, 2008 11:45 AM

in response to: cbblanke Clay,

These domain specific routines does not do interpolation, but they perform the required reprojection . The elevation data from the latlon projection should be reprojected to lambert conformal for your run. This is required since all parameter data used are in latlon projection.

-S